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**A CRUSTACEOUS PARASITE OF THE "MILLER'S
THUMB" (*COTTUS*).**

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In April, 1891, in a creek near Westerville, Ohio, my friend, E. V. Wilcox, now a student at Harvard, caught a small Miller's Thumb (*cottus*), which was preserved in alcohol for future study. It finally came into my hands for examination, and on opening the mouth I at once saw a number of crustaceous parasites fastened among the fringes of the gills and in the mucous membrane of the protected parts. On removing them their very unusual outline strongly attracted my attention. I could recall no species of this interesting group to which it belonged, nor has a subsequent search of the literature revealed a description. Therefore I submit drawings which illustrate its form and structure in part and describe its main features. I have with me also examples in alcohol and in balsam, which I hope as many as possible will do me the honor to examine.

It is doubtfully referred to the genus *Ergasilus*; for the present, then, let it be known as *Ergasilus cotti*.

The total length, *i. e.*, to end of egg-sacks, 2.25 mm.; length of egg-sacks, .75 mm.; of body to neck-like anterior prolongation, is .75 mm.; of "neck," .5 mm.

The cephalothorax is divided into two distinct parts: first, a stout basal portion as broad as long and strongly constricted medially; and, second, a neck-like portion arising anteriorly from the former; the "neck" is two-thirds as long as the remainder of the body, and inclining ventrally at a considerable angle.

At the extremity of this cephalic process are borne the antennæ and antennulæ; the former (Figs. 1 and 2, A) are prehensile, have the basal joint much swollen dorso-laterally, and the terminal joint or chitinous hooklet bearing a stout tooth on the inner edge at base. The antennulæ are situated dorso-cephalad in regard to the antennæ; they are slender, minute; length, .1 mm., six-jointed; the articles

are approximately equal in length, except the first or basal, which is equal to the second and third together ; bristles long.

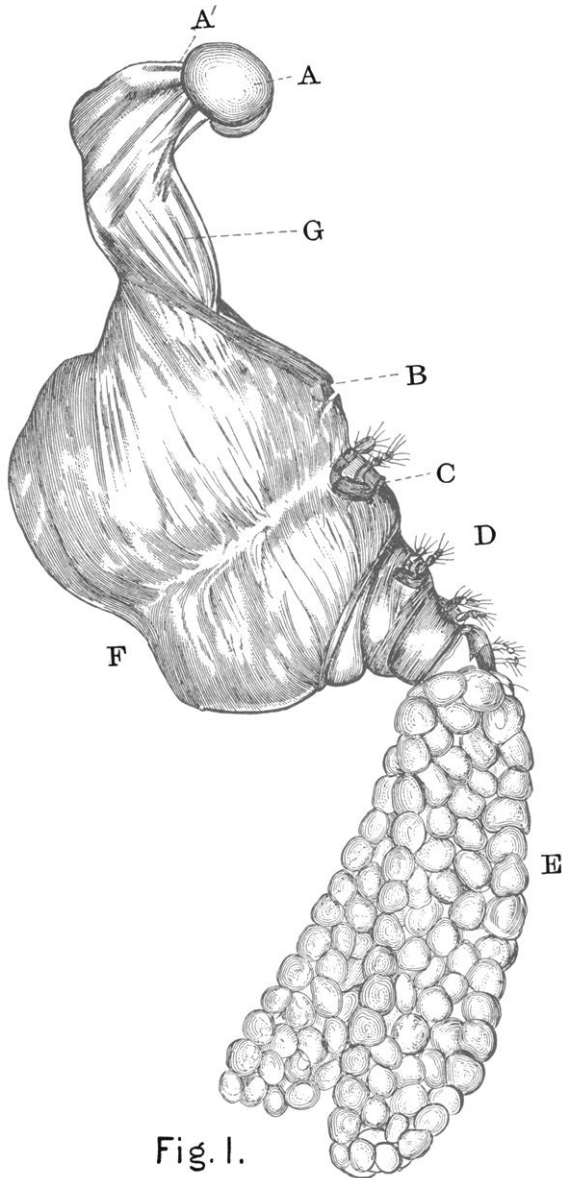


Fig. 1.

The position and outline of the eye is shown in Fig. 2, at E.

The mouth parts (Fig. 1, B) are situated cephalad of the median constriction; mandibles without palps; basal joint stout; distal part triangular; median edge apparently with a few slender, short bristles; maxilla not defined; maxillipede articulates with a strong sternal bar, stout basally, pointed, and armed with minute bristles inwardly.

Below the constriction, wide apart, are a pair of natatory feet; between them is a wide sternum, expanding laterally to assist in the formation of the articulation of the basal joint of the limb. This

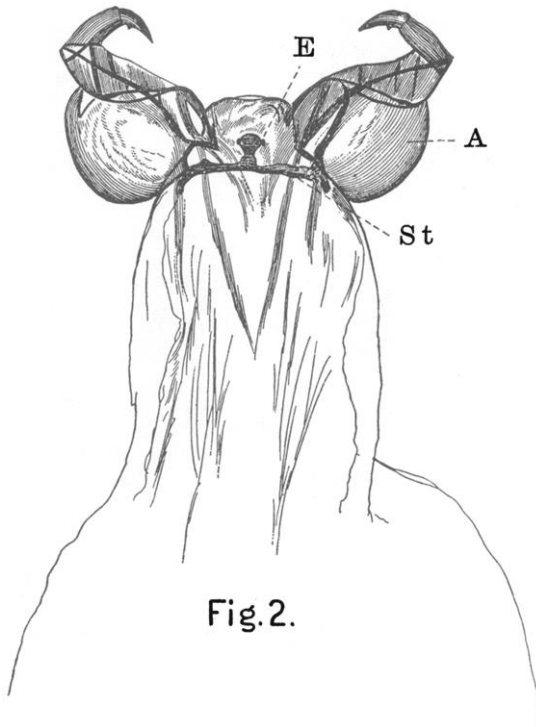


Fig.2.

joint is stout, and bears an external and an internal ramus, each three-jointed. The bristles on the joints of the rami of the several feet are not long and pointed as usual, but short and truncate, as if cut off squarely with scissors. If accidentally broken I cannot see why they are left so even, nor why all of the dozen, more or less, reviewed should show such uniformity.

The reduced abdominal rings are of the usual form and bear normal swimming feet. The genital segment is larger than others and shows the usual chitinous rods, which serve as fulcra for the attachment and movement of the egg-sacks. These sacks are in length equal to that of the body, slightly curved, with about four rows of eggs, in lateral view. The furcal setæ appear to be constantly three. The inner one on each lobe is long and blade-like; the two outer ones about half the length of the first, much slenderer. I have not been able to define them with sufficient constancy to be of great diagnostic value.

Explanation of the Figures.

FIGURE 1.—Female seen from the side.

A—Basal joint of antennæ.

A'—Position of antennulæ, concealed.

G—Neck-like portion of cephalothorax.

B—Mouth.

C and D—Natatory limbs.

E—Egg-sacks.

F—Constriction of body.

FIGURE 2.—Anterior part of head, seen from below.

A—Antenna.

E—Eye.

St—Sternal bar uniting hinge joints of the two antennæ.